

## CLAIMS

I claim:

- 5           1. A scatter/gather list comprising:  
            a plurality of scatter/gather list sections  
            stored in a memory wherein at least one  
            scatter/gather list section comprises:  
                a plurality of data elements, wherein  
10           each data element comprises:  
                    an end-of-list flag; and  
                    an end-of-section flag.
- 15           2. The scatter/gather list of Claim 1 wherein  
said end-of-list flag has a same value in said each  
data element.
- 20           3. The scatter/gather list of Claim 1 wherein  
said end-of-section flag has a same value in said each  
data element.
- 25           4. The scatter/gather list of Claim 1 wherein  
said end-of-section flag has a first value in a last  
data element in said plurality of data elements, and a  
second value in all other data elements in said  
plurality of data elements.
- 30           5. The scatter/gather list of Claim 4 wherein  
said end-of-list flag has a same value in said each-  
data element.
6. The scatter/gather list of Claim 4 wherein  
said end-of-list flag has a first value in said last  
data element in said plurality of data elements, and a

second value in all other data elements in said plurality of data elements.

7. The scatter/gather list of Claim 1 wherein  
5 said end-of-list flag has a size of one bit.

8. The scatter/gather list of Claim 1 wherein  
said end-of-section flag has a size of one bit.

10 9. The scatter/gather list of Claim 1 wherein  
said each data element further comprises:  
an address field.

10. The scatter/gather list of Claim 9 wherein  
15 said end-of-list flag, and said end-of-section flag are  
included within said address field.

11. The scatter/gather list of Claim 1 wherein  
said each data element further comprises:  
20 a length field.

12. The scatter/gather list of Claim 9 wherein  
said each data element further comprises:  
a length field.

25 13. The scatter/gather list of Claim 1 wherein  
said at least one scatter/gather list section further  
comprises:

a link element comprising:  
30 an end-of-list flag; and  
an end-of-section flag.

14. A scatter/gather list comprising:

a plurality of scatter/gather list sections wherein at least one scatter/gather list section comprises:

- 5       a plurality of data elements, wherein  
      each data element comprises:
  - an end-of-list flag;
  - an end-of-section flag;
  - an address field having a data
  - 10       segment address; and
  - a length field having a data
  - segment length; and
  - a link element comprising:
    - an end-of-list flag;
    - an end-of-section flag; and
    - 15       an address field having a next list
    - section address.

15. A scatter/gather list comprising:

20       a plurality of scatter/gather list sections wherein at least one scatter/gather list section comprises:

- 25       a plurality of data elements, wherein  
      each data element consists of:
  - an address field comprising:
    - a data segment address;
    - an end-of-list flag; and
    - an end-of-section flag; and
  - a link element consisting of:
    - an address field comprising:
      - 30       a next list section address;
      - an end-of-list flag; and
      - an end-of-section flag.

16. A structure comprising:

a memory comprising a scatter/gather list comprising a plurality of scatter/gather list sections wherein at least one scatter/gather list section comprises:

5           a plurality of data elements wherein each data element comprises:

          an end-of-list flag; and  
          an end-of-section flag.

10        17. The structure of Claim 16 wherein said at least one scatter/gather list section further comprises:

          a link element comprising:  
          an end-of-list flag; and  
15        an end-of-section flag.

18 A structure comprising:

          a memory comprising a scatter/gather list comprising a plurality of scatter/gather list  
20        sections wherein at least one scatter/gather list section comprises:

          a plurality of data elements, wherein each data element comprises:  
          an end-of-list flag;  
25        an end-of-section flag;  
          an address field having a data segment address; and  
          a length field having a data segment length; and  
30        a link element comprising:  
          an end-of-list flag;  
          an end-of-section flag; and  
          an address field having a next list section address.

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19. A method comprising:

storing a scatter/gather list as a plurality  
of sections in a memory, wherein each section  
includes a plurality of elements wherein each  
5 element comprises:

an address;

an end-of-list flag; and

an end-of-section flag

10 setting an end-of-list flag in a last data  
element of a last section in said plurality of  
sections; and

setting an end-of-section flag in at least  
one of said plurality of sections other than said  
last section.

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20. The method of Claim 19 wherein said setting  
an end-of-section flag is performed on a last data  
element in said at least one of said plurality of  
sections other than said last section.

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21. The method of Claim 19 wherein said setting  
an end-of-section flag is performed on a link element  
in said at least one of said plurality of sections  
other than said last section.

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